PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

BC hydro

BRITISH COLUMBIA

Fisheries Program
Annual Report 1995/96

B. G. Blackman
April 2000

PWFWCP Report No. 220

The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave. 3rd Floor, Prince George B.C. V2L 3H9

Website: *www.bchydro.bc.ca/environment/initiatives/pwcp/*

This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

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PEACE / WILLISTON FISH AND WILDLIFE COMPENSATION PROGRAM

FISHERIES PROGRAM ANNUAL REPORT 1995/96

STEERING COMMITTEE MEMBERS:

Ted Down (B.C. Environment)
Ron Fernandas (B.C. Hydro)
Colin Gurnsey (B.C. Hydro)
Al Sanderson (B.C. Environment)

TECHNICAL COMMITTEE MEMBERS:

J. Owen Fleming (B.C. Hydro)
Don Cadden (B.C. Environment)
Ted Euchner (B.C. Environment)
Bob Westcott (B.C. Hydro)

TECHNICAL ADVISOR

K. Ashley (B.C. Environment)

PROGRAM FISHERIES BIOLOGISTS

B. G. Blackman (B.C. Environment)
A. Langston (B.C. Hydro)

PROGRAM ADMINISTRATION

Brian Blackman and Arne Langston continued as full time biologists responsible for administering, managing and conducting research and enhancement projects within the Fisheries Program of the Peace / Williston Fish and Wildlife Compensation Program (PWFWCP) in 1995/96. Various consulting firms, contractors and individuals were employed to undertake work on a variety of projects. The Technical Committee membership changed this year with B. Westcott replacing D. Wilson as a B.C. Hydro representative and T. Euchner replaced T. Down as a B.C. Environment representative. The Steering Committee also underwent a change in representation with R. Fernandas, and C. Gurnsey, replacing N. Grant and Z. Hawthorn as representatives from B.C. Hydro. T. Down and A. Sanderson replaced H. Andrusak and D. Zirul as representatives from B.C. Environment.

Administrative activities of the Program biologists included preparation of the 1994/95 Annual Report and the 1995/96 Quarterly Reports, project accounting and contract management. A new logo for the PWFWCP was also developed.

PROGRAM PLANNING

One Technical Committee meeting was held to discuss current years projects, finances and prepare a budget for the 1996/97 Fisheries Program which was submitted to the Steering Committee for approval.

Funding proposals were prepared and submitted for:

Habitat Conservation Fund	Small Lake Rainbow Trout Spawning Habitat Survey	$ 15,000
Habitat Conservation Fund	Carbon Side Channel	$50,000
Habitat Conservation Fund	Lions Lake Enhancement	$ 15,000
World Wildlife Fund	Table / Anzac Rivers Arctic Grayling Studies	$ 10,000
Forest Renewal B.C.	Carbon Side Channel (joint submission with Canfor)	*$50,000
Forest Renewal B.C.	Table / Anzac Rivers Arctic Grayling Studies	*$41,000
Forest Renewal B.C.	Stream Video Mapping	* $47,000

* funding received

The logistics and co-ordination of current and future projects were discussed with co-operative agencies including:

- Canfor, Carbon Side Channel inventory needs in the Carbon Watershed possible cooperative projects with Canfor, PWFWCP and Saulteau First Nations;
- The Pas Lumber, Table River arctic grayling studies, Table River habitat restoration enhanced forestry projects stream video surveys and small lake surveys;
- Timber West Forest Ltd. and Finlay Forest Industries, inventory needs for stream video surveys, small lake survey priorities, stream inventory projects such as Mesilinka (PWFWCP & FFI), Clearwater (FFI), Akie(TW) and Ospika(TW), Arctic grayling radio telemetry and, genetic sampling of Arctic grayling bull and Rainbow trout as well as possible future co-operative projects and information exchange;
- Regional F&W Habitat staff in Prince George, Mackenzie, Ft. St. James and Dawson Creek (all projects in their areas)
- Ministry of Forests in Prince George, Mackenzie and Dawson Creek, (all projects in their areas);

- UNBC foreshore planting and aquatic plant transplants;
- UBC genetic analysis of arctic grayling from scale and tissue samples;
- Mackenzie Fish and Game Club, Dina Creek maintenance

Compensation program staff have provided the impetus and several reports B.C. Environment staff to have Arctic grayling classified as red listed within the Williston Basin with a classification..G1QS1/ critically imperiled both globally and subnationally.

PUBLIC CONSULTATION

Presentations and Meetings

A display on the PWFWCP Fisheries Program was prepared and exhibited at the Northern Forest Products Association Convention in Prince George. Photo's and text were supplied for public displays at GMS and for a BCH Environmental Awareness poster. A meeting was attended with the Peace / Williston Advisory Committee to discuss Fisheries Program activities during 1995 and planned activities for 1996. A meeting was held with the Mackenzie Fish and Game Association to discuss past and future Program activities as well as plan public involvement projects in the area. A workshop with the Saulteau Development Corporation was attended to show support for the SDC program and discuss possible future cooperative projects with the Band.

Natureline/Information Dissemination

Natureline No.7 (a special fisheries edition) was prepared and distributed during the winter of 1995/96.
This issue contained articles on: fish tagging studies, Johnson Creek Enhancements, Finlay River Lake Trout Investigations, Bruce Lake Brook Trout, Canty Lake Project, Williston Reservoir Kokanee Project Gaylard Creek Inventory and Mesilinka River Fertilization Project.

PROJECT SUMMARIES

INVENTORY AND ASSESSMENT

1. Table River

Objective: Gather life history information on Arctic grayling and to determine enhancement opportunities.

An additional $41,000 in funding for this project was received from the Watershed Restoration Program (Forest Renewal B.C.) and two technicians from the Saulteau First Nations Band were employed to assist in the project.

The surveys greatly increased the amount of Arctic grayling life history information available on this "red listed species". Population estimates were made on the mainstem inhabitants and detailed habitat utilization information was gathered on adults. Flood conditions throughout much of the summer made obtaining juvenile information difficult. It is probable that a high

percentage of the young of the year fry were lost this year because of the flood conditions. However, a small number (12) of Arctic grayling fry were captured.

As a result of the surveys, a number of habitat restoration / enhancement projects have been identified. It is anticipated that an extensive habitat restoration project and continued habitat utilization work will be carried out in this watershed in conjunction with FRBC and The Pas Lumber Co. Ltd.

Watershed Restoration Program (Forest Renewal B.C.) provided an additional $41,000 for this project. This funding allowed more detailed evaluations to be conducted and two technicians from the Saulteau First Nations Band were employed to assist in this project.

2. Dunlevy Fence

Objective: Gather information on fish movements in and out of Dunlevy Creek, obtain life history information and evaluate returns of stocked rainbow trout and kokanee to this stream,

The Dunlevy fence was operated and maintained by the Saulteau First Nations Band. Extremely high flows resulted in very difficult trapping conditions and it appears that most of this seasons young of the year fry were lost. Upstream and downstream migration counts were incomplete because high flows destroyed the original fence, however over 400 rainbow trout were captured and approximately 300 kokanee entered the stream this year, although only 88 went through the fence. This contract went significantly over budget in part because of the staff required to deal with the unusually severe flood conditions. The Saulteau First Nations Band operated the fence and were extremely cooperative and conscientious about the work.

ENHANCEMENT

3. Mesilinka Fertilization

Objective: Examine the effectiveness of low level inorganic fertilization as a technique to increase size at age and standing biomass of sportfish in this cold water system.

This project was completed budget, mainstem and tributary sections were fertilized, different application techniques were evaluated, algal response was good and numbers of mountain whitefish and rainbow trout appear to have increased in the treatment sections of the river. This project was coordinated by B.C. Environment Staff.

4. Project Maintenance

Objective: Provide maintenance of the Windy Point Upwelling station, Dina Creek spawning habitat /public involvement project and install a sign program at Dina Creek.

This project was well under budget this year. Windy Point upwelling station was operated successfully and no major repairs were required. There was no formal assessment of the numbers of fish using the upwelling station, but use appeared to be high.

Dina Creek required minimal maintenance and 600-1000 rainbow trout and a small number of brook trout spawned in the enhanced section of stream. The Dina Creek sign has been completed and will be installed next spring.

Sandbags filled with gravel were placed at Dina Lake and have been carried into Dina Lake # 3 by volunteers from the Rocky Mountain Riders Snowmobile Club for a spawning habitat improvement project scheduled for 1996.

5. Stocking and Kokanee Production

Objective: Provide funding for helicopter fish liberation's, incubation, rearing and release of kokanee into the Williston Watershed.

Kokanee production and stocking costs were $ 10,000 for 1995/96. Approximately 62,500 rainbow trout were released into nine lakes, 57,500 brook trout were released into five lakes and 400,000 kokanee were released into four rivers.

6. Gething Bull Trout Transplant

Objective: Transplant adult bull trout from Gething Creek upstream above an impassable falls. This will provide access to new spawning and rearing habitats and may establish a resident population that could contribute to the Dinosaur Reservoir fishery,

This project was canceled this year because of manpower and budget limitations.

7. Carbon Side Channel

Objective: To create approximately 10,000 m^2 of high quality spawning and rearing habitat for fish species in Carbon Creek.

Construction and clean up costs for this project were approximately $43,000. Both channels A and B have been excavated, the protective dike has been built along the length of the channel and an access road has been completed. Flows in the channel were approximately 1.0 m3 / sec (25cfs) initially but by the end of the construction phase flows had dropped to approximately half that level. However, there was no rain during the month of September and flows in the mainstem adjacent the channel were nearly sub gravel. It appears that the mainstem of Carbon Creek will dry before the channel. An additional $50,000 for construction was approved for this project through Watershed Restoration. These funds were be used to haul gravel to the site after the ground had frozen. It is anticipated that carry over ($15,000) from these funds will be sufficient to distribute the gravel and complete a site clean up.

EVALUATIONS

8. Kokanee Spawner Evaluations

Objective: To evaluate kokanee spawner returns resulting from the kokanee stocking program.

Approximately 5,000 spawners were observed in Philip Creek (a tributary of the Nation River) on Sept. 24, but by Sept. 29 these fish had dispersed and only a small number were present. No other kokanee were observed in the Nation River.

On Sept. 29, helicopter surveys found approximately 1,700 kokanee in Manson River. One week later these fish had disappeared as well. There were reports of kokanee spawning in Gaffney Creek, a tributary of Manson River but these reports were not confirmed.

Approximately 300 kokanee spawners were observed in Dunlevy Creek but only 88 passed through the Dunlevy Fish Fence in early September.

Several helicopter surveys failed to find any kokanee in Carbon Creek or in the Finlay and Akie Rivers.

OUTSIDE FUNDING

9. Watershed Restoration

FRBC (Watershed Restoration Program) has provided $40,750 in funding for the Table River Inventory, A joint submission through Canadian Forest Products Ltd. for $50,000 has been approved to assist in construction of the Carbon Side Channel. The Watershed Restoration Program has also approved $44,700 to conduct stream video surveys, mapping and habitat evaluations on the Hominka, Parsnip, Mesilinka, Omineca, Osilinka and Ospika Rivers. The video surveys were not completed because of weather conditions but the funds will be carried over to 1996.

FINANCIAL SUMMARY

The Fisheries Program expenditures during the 1995/96 fiscal totaled $440,562. Administrative costs were $44,217 (10%), Planning $41,853 (9%), Public Consultation $12,337 (3%) Inventory and Assessment $160,859 (37%) Enhancements $166,041 (38%) and Evaluations 15,255 (3%)(Fig 1).

In addition, outside funding ($50,000) was received from Forest Renewal B.C. for a joint submission with Canfor for work on the Carbon Side Channel. FRBC funding ($41,000) was also received for work on the Table /Anzac Rivers Inventory and ($45,000) for Stream Inventory Video Surveys. The video surveys were not completed because of weather conditions but he money will be carried over to 1996/97. Time spent procuring and administering these funds was charged to planning and administration thus increasing those costs, The total dollar value spent on fish enhancements and inventory for the 1995/96 fiscal was $417,900 .

Moneys expended within the six cost categories were somewhat different than originally budgeted (Table 1). Public consultation costs were reduced because of the cancellation of the Stakeholder / Public meetings. Inventory and assessment costs were higher than anticipated because of cost overruns on Dunlevy fence, partially as a result of extremely high flows this summer. Enhancement costs were lower that expected because of cost savings on several projects and the cancellation of the Gething bull trout transplant

Figure 1. Fisheries Program Expenditures for the 1995/96 Fiscal Year.

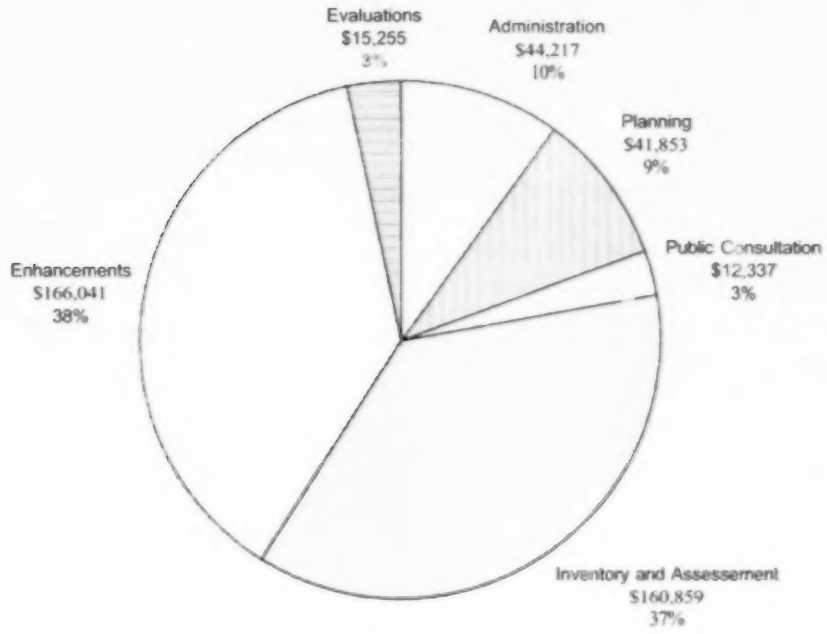

Table 1. Detailed budget expenditures for the 1995/96 fiscal.

COST CATEGORY	SPECIFIC PROJECT	PROJECT COSTS	TOTAL EXPENDED	% EXPENDED	% BUDGETED
Administration			44,217	10	10
Planning			41,853	9	8
Public Consultation			12,337	3	7
Inventory / Assessment	Table/Anzac	57,950		37	24
	Dunlevy Fence	101,287			
	Misc.	1,622	160,859		
Enhancement	Mesilinka Fertilization	91,029		38	47
	Project Maintenance	8,631			
	Stocking/Kokanee	10,272			
	Gething Bull Trout				
	Carbon Side Channel	55,470			
	Grizzly Lake	164			
	Misc (hab/sp protection)	461	166041		
Evaluation	Kokanee Spawner Evaluations	15,255	15255	3	5
Total			440,562		
Outside Funding	Carbon Side Channel	50,000			
	Table Anzac R	41,000	531,562		